VARIABLE FREQUENCY

PHASE-SHIFT OSCILLATOR

LIST NO. A.C.240

SERIAL NO. 1254

H.W. SULLIVAN LTD. LONDON.

I N S T R U C T I O N S

FOR USE OF

VARIABLE FREQUENCY PHASE-SHIFT OSCILLATOR

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This oscillator is mains operated and comprises five phase shift networks (which are inserted at will by means of a range switch), the maintaining amplifier, an amplitude control valve and a push-pull output stage.

FREQUENCY RANGE.

40 c/s - 125 kc/s (Accuracy 1%)

This frequency range is covered in five continuous sweeps which are selected for use by means of the Range Switch as follows:-

40 c/s - 90 c/s
90 c/s - 550 c/s
550 c/s - 3500 c/s

3.5 kc/s - 21.5 kc/s
21.5 kc/s - 125 kc/s

OUTPUT CONTROL.

This control follows a logarithmic law to facilitate the accurate control of low outputs.

An output up to six watts may be obtained when using a suitable load impedance.

OUTPUT IMPEDANCE.

Although the oscillator is arranged to work into an impedance of 600 ohms and will naturally deliver a maximum power under these conditions, it may, of course, be used satisfactorily over a wide range of load impedances.

Two output transformers, the output windings of which are screened and balanced about earth, are incorporated in the instrument and are selected for use by means of the switch adjacent to the output terminals. One is for use over a frequency band of 40 c/s - 3500 c/s and the other for use over a frequency band of 3.5 kc/s - 125 kc/s.

HARMONIC CONTENT.

When using an output up to one watt into a suitable load, the harmonic content will be of the order of 1%. At full output of about six watts the distortion will be scarcely visible on an oscilloscope.

OUTPUT LEVEL.

With the Output Control set in any given position the output level throughout the frequency ranges, or when switching from one range to another, will remain constant to $\pm$ 1 db.

SETTING UP

The oscillator should be set up in such a position as to provide free ventilation through the bottom of the instrument.

The back cover can be withdrawn after rotating the retaining screws.

The mains input transformer is provided with a tapped primary winding; check that the correct taps are in use and, if necessary, adjust them to suit the available supply.

VALVES.

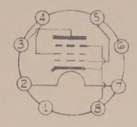
V_1	EF.91	V_5	EF.91
V_2	EF.91	V_6	E.L.33
V_3	E.B.34	V_7	E.L.33
V_4	EF.91	V_8	IW4/500

CIRCUIT.

See Drawing No. 9712 attached for circuit details.

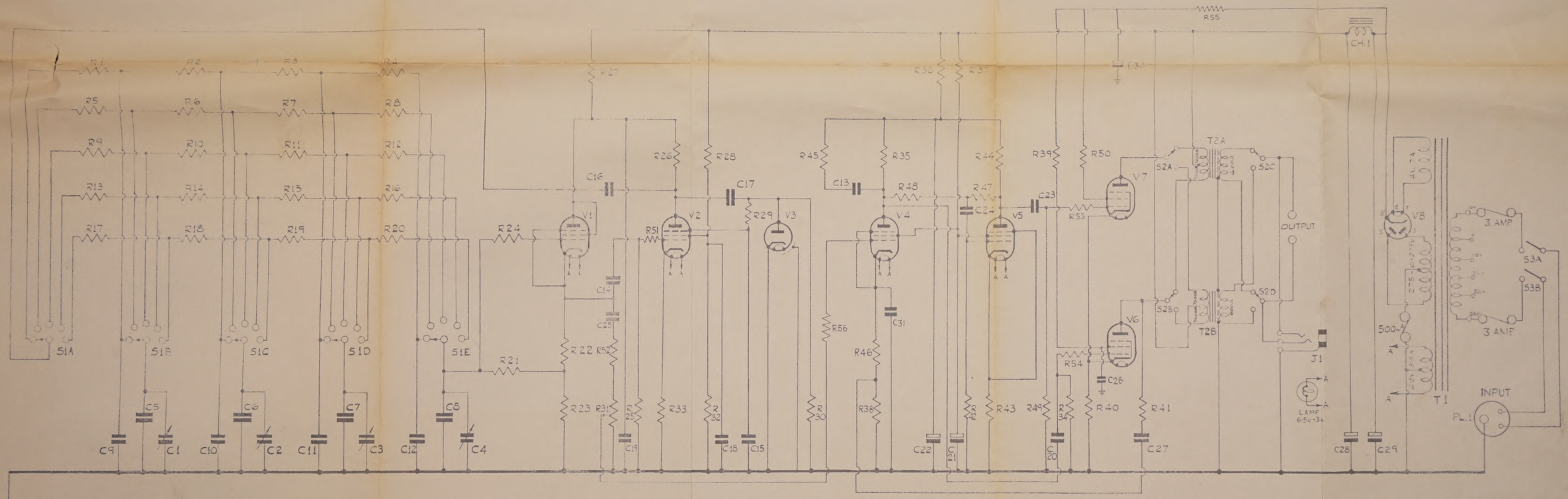
EF.91

EB34



EL33

IW4/500



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